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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,121	02/03/2006	Kenta Hatano	1163-0543PUS1	3023
2292 7590 04/17/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER DESAL, NAISHADH N				
ART UNIT 2834		PAPER NUMBER		
NOTIFICATION DATE 04/17/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/567,121

Applicant(s)

HATANO ET AL.

Examiner

NAISHADH N. DESAI

Art Unit

2834

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-11, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “first and second end portions of the metallic member” as recited in claims 1, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what applicant means by "...a washer that is fitted to the external wheel of the metallic member...". Perhaps applicant meant to claim "a washer that is fitted to the external wheel of the bearing"?
4. Claim 3 recites the limitation "external wheel of the metallic member " in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1,3,4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 6089536) in view of Ohta et al (US 6157103).

1. Regarding claim 1, Watanabe et al teaches:

A motor-bearing holding structure comprising (Figs 4A&B):

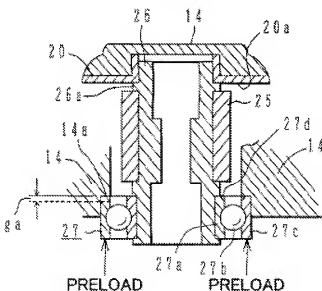
U.S. Patent

Jul. 18, 2000

Sheet 3 of 4

6,089,536

FIG.4A



a metallic member (Fig 1,28) having a first end portion and a second end portion, wherein the first end portion (it is clear that element 28 in Fig 1 has a first and second end portion) is integrally molded with the rotor (method of making limitation, patentable weight not given); and

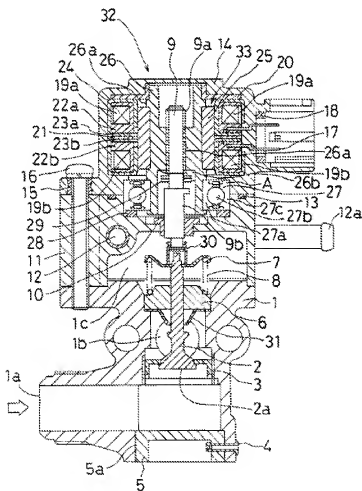
U.S. Patent

Jul. 18, 2000

Sheet 1 of 4

6,089,536

FIG.1



a first bearing (Fig 4A,27) having an inner wheel (Fig 4A,27a) and an external wheel (Fig 4A,27c),

Watanabe et al does not explicitly teach that "the second end portion of the metallic member is rotatably held to the inner wheel at two or more places at equally spaced intervals around a rotary central axis of the molded rotor".

Ohta et al teaches a device having a metallic member (Fig 1,51 and Col 5 ll 55-56) wherein the second end portion of the metallic member (Fig 7,51) is rotatably held to the inner wheel (Fig 1 by element 47 indicating inner race / wheel of bearing) at two or more places at equally spaced intervals around a rotary central axis of the molded rotor (Figs 7 and 8 element 51).

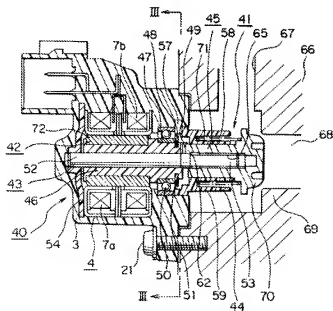
U.S. Patent

Dec. 5, 2000

Sheet 1 of 5

6,157,103

FIG. 1



U.S. Patent

Dec. 5, 2000

Sheet 4 of 5

6,157,103

FIG. 7



FIG. 8



It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Watanabe et al with the teachings of Ohta et al to use a bearing support member made of metal and arrange it as desired. The motivation to do so would be that it would allow one to produce a device having reduced manufacturing cost (Col 3 l 48), urge a bearing in a certain direction by using a spring (Col 3 ll 66-67) and to make it integral with a valve device to allow one to control the flow of fluid (Col 4 ll 32-34).

Watanabe et al and Ohta et al discloses the claimed invention except for explicitly mentioning that the rotor and bearing insert/support member are an integrated unit. It would have been obvious to one having ordinary skills in the art at the time the invention was made to combine the rotor and the bearing insert/support member into an integrated unit, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works, 150 U.S 164 (1893).*

In regards to claim 1 the method of making limitations are not germane to the patentability of the apparatus and have not been given patentable weight. The patentability of the product does not depend on its method of production. If the product in the product by process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process". In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966(Fed. Cir. 1985). In this instance the case it is obvious that molding the rotor and metal insert can be done together or separately, as Ohta et al teaches bearing insert/support structure and Watanabe et al teaches the use of molding to make a EGR device.

2. Regarding claim 3, Watanabe et al teaches (Fig 1,28) a washer that is fitted to the external wheel of the metallic member protruding from the rotor is secured to the metallic member under conditions where the washer is pressed against the bearing. Also Ohta et al (Fig 1,51) teaches the use of a plate spring which directly abuts the bearing.

3. Regarding claim 4, Ohta et al teaches (Figs 7 and 8) that the molded part of the metallic member is provided with a concave portion.

Watanabe et al does not appear to explicitly teach the metallic member is provided with a convex portion. Watanabe et al and Ohta et al discloses the claimed invention except for the shape or size of the metallic member to be convex and concave. It would have been an obvious matter of design choice to make the metallic member have a convex and a concave shape, since such a modification would have involved a mere change in

the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). The motivation to do so would be that it would depend on the cost, size and space available for the different parts.

4. Regarding claim 7, Watanabe et al teaches a second bearing (Fig 4B,102,103) wherein the molded rotor (method of making, patentable weight not given) is rotatably and axially movable over a predefined range held by the first and second bearings (it is obvious that the washer (Fig 1,28) will allow movement of the bearings in the axial direction).

In this instance, it would have been obvious to use more bearings since it would allow one to reduce vibrations and to better control the device as desired.

5. Regarding claim 11, Watanabe et al and Ohta et al discloses the claimed invention except for mentioning that the metallic member is formed of several pieces instead of an integrated unit, such that "the metallic member is a plurality of metallic members each including a washer that is fixed to corresponding metallic member". It would have been obvious to one having ordinary skills in the art at the time the invention was made to make the metallic member of several pieces instead, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179. The motivation to do

so would be that it would allow on to exert pressure on the bearing parts and hold them in place as desired.

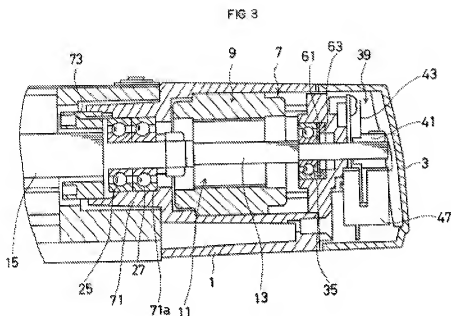
6. Regarding claim 13, Ohta et al teaches that the external diameter of the washer (Figs 7 and 8,51) is superimposed on the inner wheel (Fig 1,51) so the washer can be pressed to be abutted against the inner wheel with a uniform force.

7. Regarding claim 14, Watanabe et al teaches that the metallic member is a ring-shape metallic member (Fig 1,28).

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 6089536) in view of Ohta et al (US 6157103) and further in view of Senjo et al (US 5831360).

8. Regarding claim 5, Watanabe et al in view of Ohta et al teaches the device as claimed, except for teaching "a stopper plate that is integrally molded with the metallic member".

Senjo et al teaches a device having a stopper plate (Fig 3,61 and 63). It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Watanabe et al and Ohta et al with the teachings of Senjo et al to use a stopper plate. The motivation to do so would be that it would allow one to exert pressure on the bearing and hold it in place as desired (Col 4 ll 27-48 of Senjo et al).



U.S. Patent

No. 3,1998

Sheet 3 of 9

5,831,360

In regards to claim 5 the method of making limitations are not germane to the patentability of the apparatus and have not been given patentable weight. The patentability of the product does not depend on its method of production. If the product in the product by process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process". In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966(Fed. Cir. 1985). In this instance the case it is obvious that a stopper plate can be integrally molded with the metallic member or separately, as Ohta et al teaches bearing insert/support structure and Watanabe et al teaches the use of molding to make a EGR device.

9. Regarding claim 8, Senjo et al (Fig 3,61) teaches that the stopper plate forms a circular exposed abutting face within a large diameter hole communicating to the central bore portion of the molded rotor.

Claims 6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (US 6089536) and Ohta et al (US 6157103) in view of Imamura et al (US 4938614).

10. Regarding claims 6,9 and 10, Watanabe et al in view of Ohta et al teaches the device as claimed except for the metallic member to be formed of a bent piece (or the convex portion of the metallic member), which is bent substantially in an L-shape or a T-shape.

Imamura et al teaches a device having a bearing stopper or support (Figs 1,2 5 and 6 element 19) of various shapes. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Watanabe et al in view of Ohta et al with the teachings of Imamura et al to use a bearing support structure (metallic member) of a particular shape. The motivation to do so would be that it would allow one to control the movement and displacement of the bearing as desired, provide a supporting structure to prevent the generation of wear of the bearing and produce a device having good dimensional accuracy and at low cost (Col 2 ll 24-34 of Imamura et al).

Response to Arguments

11. Applicant's arguments with respect to claims 1,3 and 4 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **NAISHADH N. DESAI** whose telephone number is (571)270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quyen Leung/
Supervisory Patent Examiner, Art Unit 2834

/Naishadh N Desai/
Examiner, Art Unit 2834